

Big Data Analytics using Python and Tableau

Course Overview:

The comprehensive short course in Big Data Analytics provides participants with the knowledge and skills to effectively analyze and derive insights from large and complex datasets. Participants will learn various techniques and tools to handle big data, perform advanced analytics, and make data-driven decisions. The course covers essential concepts, methodologies, and best practices in big data analytics, ensuring participants gain a solid foundation in this rapidly evolving field.

Delivery Mode:

The course will be delivered through a combination of interactive lectures, hands-on exercises, case studies, and discussions, allowing participants to apply big data analytics techniques in a practical and real-world context.

Course Objectives:

By the end of the course, participants will be able to:

- 1) Understand the fundamentals of big data analytics and its applications in various industries.
- 2) Acquire knowledge of different big data technologies and tools for data processing and analysis.
- 3) Perform exploratory data analysis and visualization techniques on large datasets.
- 4) Apply advanced analytics techniques, including predictive modeling and machine learning algorithms, to derive insights from big data.
- 5) Interpret and communicate analytical findings to support decision-making processes.

Target Audience:

- 1) Managers and professionals involved in data analysis, business intelligence, and decision-making roles.
- 2) Data analysts and data scientists seeking to enhance their skills in big data analytics.
- 3) IT professionals interested in understanding and leveraging big data technologies and tools.
- 4) Individuals who want to gain practical exposure to big data analytics for career advancement.

Learning Outcomes:

Upon completion of the course, participants will have acquired the following skills:

- 1) Knowledge of big data analytics concepts, methodologies, and industry best practices.
- 2) Proficiency in using big data technologies and tools for data processing and analysis.
- 3) Ability to perform exploratory data analysis and visualization on large datasets.

- 4) Competence in applying advanced analytics techniques, such as predictive modeling and machine learning algorithms.
- 5) Capability to interpret and effectively communicate analytical findings to support decision-making processes.

Training Software:

The course will utilize the following software and tools for big data analytics:

- Python: A widely used programming language with powerful libraries for data analysis and machine learning, such as Pandas, NumPy, and scikit-learn.
- Tableau: A popular data visualization tool for creating interactive and insightful visual representations of big data.

Study Modules (Structured Course Outline):***Introduction to Big Data Analytics***

- Overview of big data analytics and its significance in today's data-driven world.
- Challenges and opportunities associated with big data analytics.

Big Data Technologies and Frameworks

- Introduction to Apache Hadoop and its ecosystem.
- Overview of Apache Spark and its capabilities in big data processing and analytics.

Data Preprocessing and Cleaning for Big Data

- Techniques for cleaning and transforming large-scale datasets.
- Handling missing data, outliers, and data quality issues in big data.

Exploratory Data Analysis on Big Data

- Performing statistical analysis and visualization on large datasets.
- Extracting meaningful insights and identifying patterns from big data.

Predictive Modeling and Machine Learning for Big Data

- Introduction to predictive modeling and machine learning algorithms for big data.
- Applying regression, classification, and clustering algorithms on large datasets.

Deep Learning and Neural Networks in Big Data Analytics

- Understanding deep learning concepts and architectures.
- Applying neural networks for big data analytics tasks, such as image and text classification.

Big Data Visualization and Communication

- Visualizing and presenting big data analytics results effectively.
- Creating interactive dashboards and visualizations using Tableau.

Ethical and Privacy Considerations in Big Data Analytics

- Addressing ethical concerns and privacy issues in big data analytics.
- Ensuring compliance with data protection regulations.

Fees: 1,200,000/= per participant.

Duration: 2 – 4 Weeks